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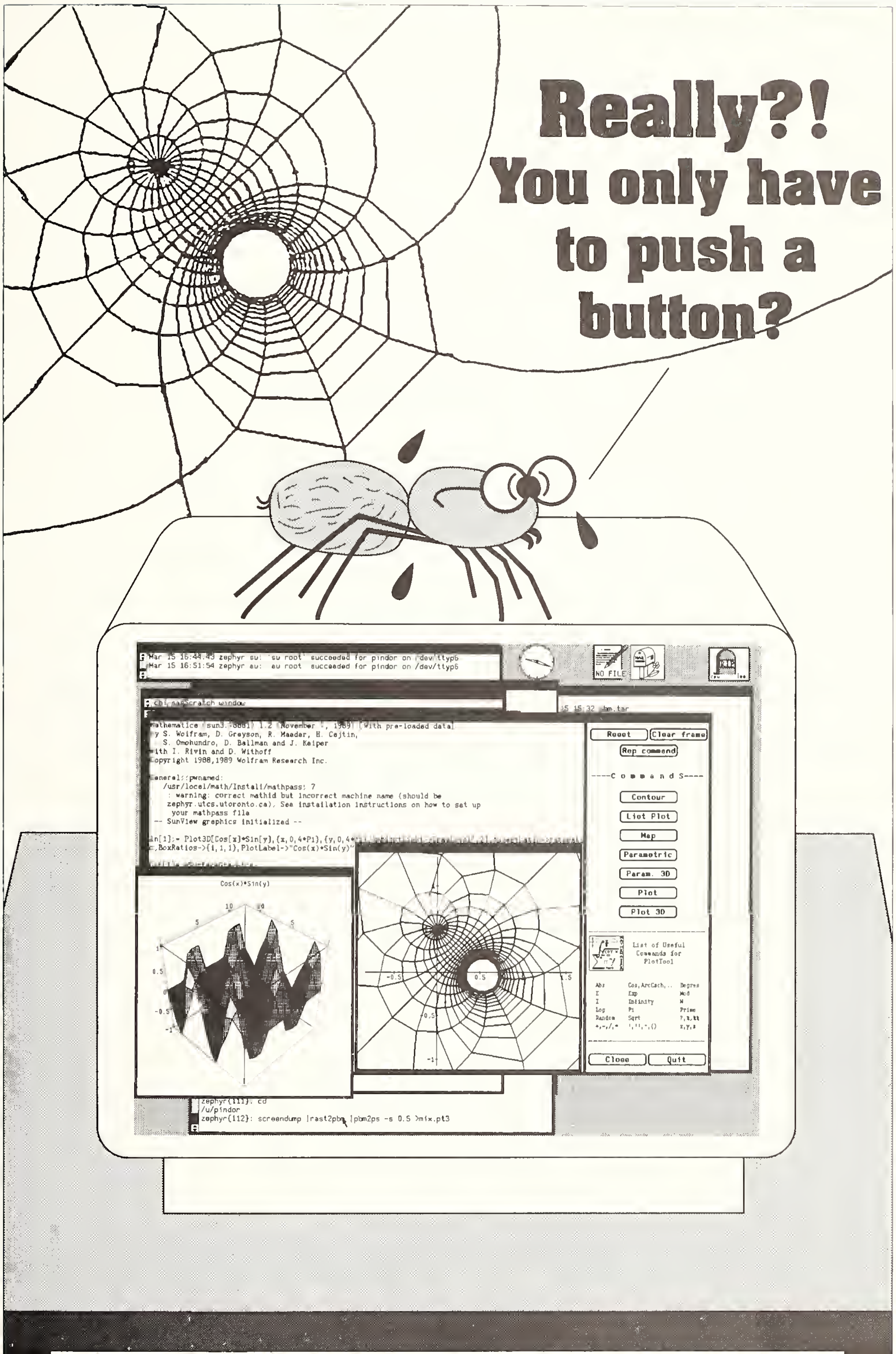
UTCS ComputerNews



```
Mar 15 16:44:43 zephyr su: 'su root' succeeded for pindor on /dev/ttyp6
Mar 15 16:51:54 zephyr su: 'su root' succeeded for pindor on /dev/ttyp6
```

```
athematica (sun3.68881) 1.2 (November ?, 1989) [With pre-loaded data]
y S. Wolfram, D. Grayson, R. Maeder, H. Cejtin,
  S. Omohundro, D. Ballman and J. Keiper
ith I. Rivin and D. Withoff
opyright 1988,1989 Wolfram Research Inc.

eneral::pwnamed:
   /usr/local/math/Install/mathpass: 7
    : warning: correct mathid but incorrect machine name (should be
    zephyr.utcs.utoronto.ca). See installation instructions on how to set up
     your mathpass file
 -- SunView graphics initialized --

In[1]:= Plot3D[Cos[x]*Sin[y],{x,0,4*Pi},{y,0,4*
,BoxRatios->{1,1,1},PlotLabel->"Cos(x)*Sin(y)"
```

```
zephyr{111}: cd
/u/pindor
zephyr{112}: screendump |rast2pbm |pbm2ps -s 0.5 >mix.pt3
```

Find out how on page one.

ISSN 0315-4661 April 1991 No. 270

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The Editor
ComputerNews
University of Toronto Computing Services
4 Bancroft Avenue, Room 217
Toronto, Ontario
Canada M5S 1A1

Network address:
phood@vm.utcs.utoronto.ca
(NetNorth/BITNET/EARN)

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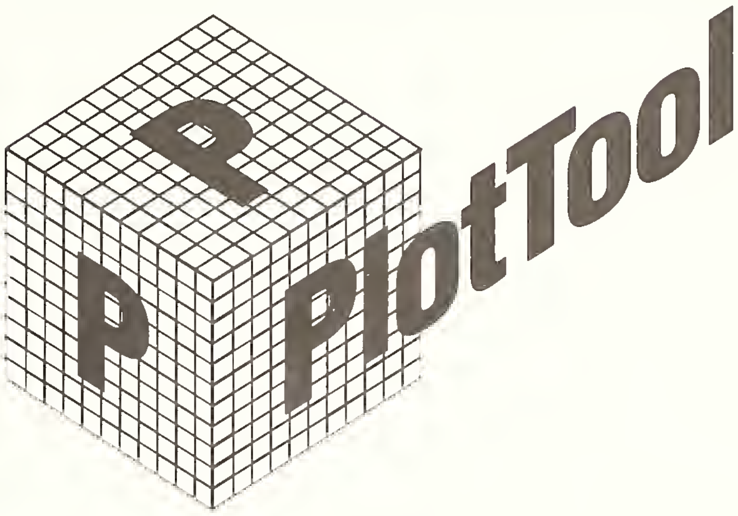


Interactive Interface to Mathematica Graphics Under SUNView

Andrzej J. Pindor
apindor@vm.utcs.utoronto.ca

Mathematica™, from Wolfram Research Inc., is a relatively new computer program for solving mathematical problems. It is designed primarily for symbolic manipulations, but it also has good numeric capabilities and a very good graphics component. (Mathematica was reviewed in the April 1989 issue of *ComputerNews*, #254.) Mathematica is quickly gaining popularity, although some users find it a difficult system to learn and use. The program's degree of user-friendliness depends on the platform on which it is being used. For instance, Mathematica for the Macintosh is virtually window-based, and requires little memorization and/or typing by you. Unfortunately, the version of Mathematica for SUN workstations, running under SUNView, has none of these friendly features. You have to remember object names, arguments, options, and specific syntaxes that accompany the program's 600+ commands (or keep checking in the manual). **PlotTool**© attempts to create a user-friendly interface for Mathematica plotting functions under SUNView. Some of PlotTool's abilities include the following:

- a window-based environment that allows you to enter your own strings or those based on PlotTool's functions;
- several options to all commands that can be accessed with a simple click of the mouse;
- ability to remember previous entries and to recall your last command with options and text input intact, saving you retyping;
- support for most of Mathematica's external graphic routines and ability to send your graphs to a printer with the click of the mouse button;
- two versions of the program: one for terminals that are licensed for use with Mathematica, and a remote login version for terminals that do not have a license. (I have not evaluated the latter version of PlotTool, so it is not discussed below.)

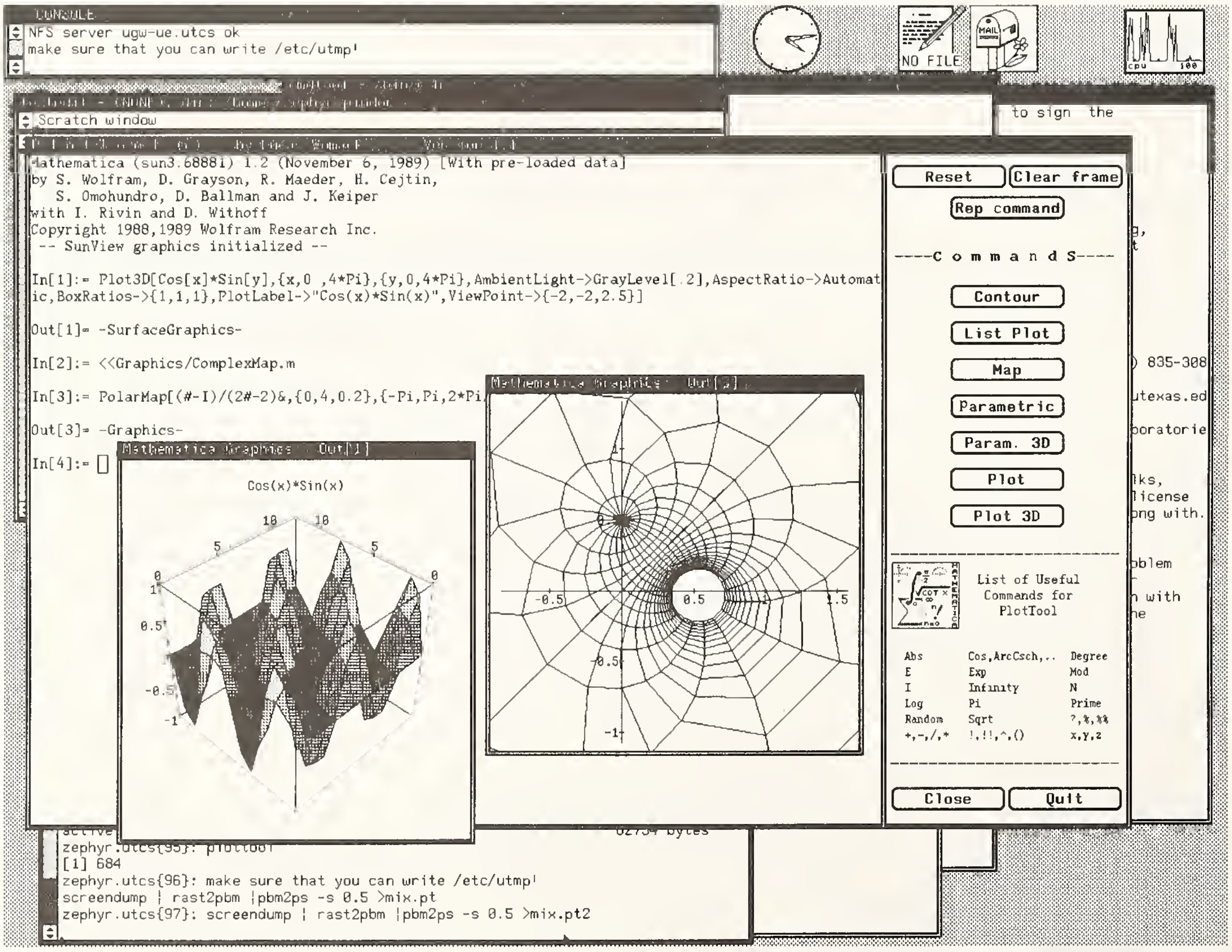
When you call up PlotTool, a large window consisting of two parts appears. This window is shown on page two in *Figure 1* (the two small graphics windows overlaying it will be discussed later). The left-hand side of the PlotTool window is the usual Mathematica window. There you can enter any Mathematica commands, and Mathematica will display the answers. The right-hand side of the PlotTool window, called the Side Menu, has twelve buttons in it. Five of these (top three and bottom two) are used for managing your PlotTool session, and the remaining seven open up submenus for creating different types of Mathematica graphs. The submenu you use to create a three-dimensional (3D) plot is shown in *Figure 2*. You do not have to remember the syntax for setting the various options available with this type of graphic; it is all laid out in front of you.

Several buttons in the submenu have little arrows on the right side. This means that when you press them you get another submenu of choices. For instance, the "Plot using:" button will give you a choice of Plot3D and ListPlot3D functions. The "Select Viewpoint" button offers you over forty different viewpoints described in plain language, such as: "Left-hand side and up" or "Back right-hand corner and below," and so on.

When you make a selection, the ViewPoint option (just below the "Select Viewpoint" button) will be filled with corresponding numbers. If none of the viewpoints offered satisfies your requirements, you can fill in the ViewPoint option by hand.

All the options have default values, and to obtain a plot you only have to specify the function (or an array for ListPlot3D), and x and y domains at the top of the submenu. After you do this, press the "Plot" button and PlotTool will proceed to construct an appropriate Mathematica command and execute it. In *Figure 1,* the first Mathematica command you see was created with the choices shown in *Figure 2.* You can see the corresponding graph in the small left-hand window in *Figure 1.* The second graphics window in *Figure 1* was created by pressing the "Map" button in the Side Menu. This button opens a submenu used for accurate mappings of simple and common math functions that have been evaluated for complex variables. It requires that you have the **ComplexMap.m** Mathematica package. After you have created a graph using the program's default settings, you may want to modify it by changing some options. In this case, simply press the "Rep command" button on the Side Menu, and you will find yourself in the previous

Figure 1: Main window of PlotTool. Right-hand side (the Side Menu) contains seven buttons that open submenus, allowing you to create different types of graphs. Two small graph windows show two types of graphs created using these submenus (see text for more information).



```
NFS server ugw-ue.utcs ok
make sure that you can write /etc/utmp'
```

```
Mathematica (sun3.68881) 1.2 (November 6, 1989) [With pre-loaded data]
by S. Wolfram, D. Grayson, R. Maeder, H. Cejtin,
   S. Omohundro, D. Ballman and J. Keiper
with I. Rivin and D. Withoff
Copyright 1988,1989 Wolfram Research Inc.
 -- SunView graphics initialized --

In[1]:= Plot3D[Cos[x]*Sin[y],{x,0 ,4*Pi},{y,0,4*Pi},AmbientLight->GrayLevel[.2],AspectRatio->Automat
ic,BoxRatios->{1,1,1},PlotLabel->"Cos(x)*Sin(x)",ViewPoint->{-2,-2,2.5}]

Out[1]= -SurfaceGraphics-

In[2]:= <<Graphics/ComplexMap.m

In[3]:= PolarMap[(#-I)/(2#-2)&,{0,4,0.2},{-Pi,Pi,2*Pi

Out[3]= -Graphics-

In[4]:= 
```

```
zephyr.utcs{95}: plottool
[1] 684
zephyr.utcs{96}: make sure that you can write /etc/utmp'
screendump | rast2pbm |pbm2ps -s 0.5 >mix.pt
zephyr.utcs{97}: screendump | rast2pbm |pbm2ps -s 0.5 >mix.pt2
```

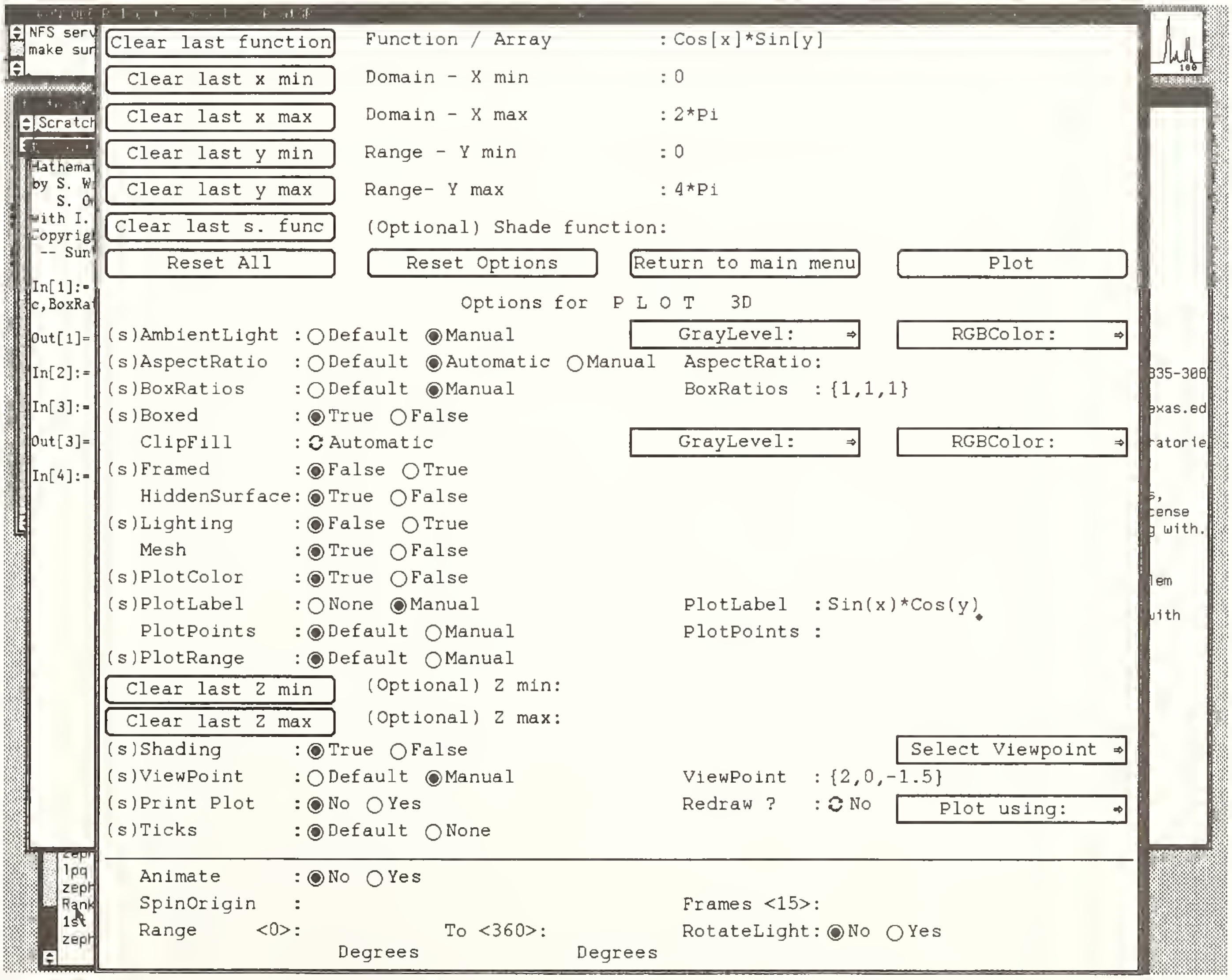
submenu, with everything you have entered previously intact. If you are only modifying the options, you can change the “Redraw” option to “Yes” (from “No”), and in this way avoid recreating the plotting data, which saves time. PlotTool remembers the most recent entries into a given submenu, regardless of whether you have run graphs from other submenus or not. Consequently, you can come back to a submenu at any time during a PlotTool session and rerun a graph, changing only those fields that need changing. Each graphics submenu also has a “Print” button, which can be used to print your graph on a PostScript printer. PlotTool does not offer you a choice of printers. Whatever printer you have chosen while outside the program is the one to which your graph will be sent.

The “Param. 3D” and “Plot 3D” submenus have options for creating animations. However, I was unable to run a Param. 3D animation. An attempt to use this feature resulted in strange error messages and an empty animation window. Since I had no problems running an animation from the “Plot 3D” submenu, and I could also run an animation of a 3D parametric plot manually (i.e., by using Mathematica’s **Animation.m** package), I suspect that there must be a bug in this particular PlotTool feature.

Generally speaking, I found PlotTool to be a nice addition to Mathematica running on SUN. It certainly makes using Mathematica graphics easier, and saves you a lot of the effort involved in preparing a graph exactly the way you want it.

PlotTool was created by Lucas Wormack of the Supercomputing Research Center, Maryland, USA. You can obtain if from the anonymous ftp site “ftp.ncsa.uiuc.edu” (128.174.20.50), from the subdirectory Symbolic/Mathematica/Packages/PLOTTOOL. If you have trouble obtaining PlotTool through ftp from the above site, please contact Andrzej Pindor through e-mail at *pindor@gpu.utcs.utoronto.ca* or *apindor@vm.utcs.utoronto.ca* or call 978-5045.

Figure 2: The Plot3D submenu of PlotTool. The entries you see correspond to the 3D plot shown in Figure 1.



Function / Array : Cos[x]*Sin[y]
Domain - X min : 0
Domain - X max : 2*Pi
Range - Y min : 0
Range- Y max : 4*Pi
(Optional) Shade function:

Options for PLOT 3D

(s)AmbientLight : ○ Default ● Manual
(s)AspectRatio : ○ Default ● Automatic ○ Manual AspectRatio:
(s)BoxRatios : ○ Default ● Manual BoxRatios : {1,1,1}
(s)Boxed : ● True ○ False
ClipFill : Automatic
(s)Framed : ● False ○ True
HiddenSurface: ● True ○ False
(s)Lighting : ● False ○ True
Mesh : ● True ○ False
(s)PlotColor : ● True ○ False
(s)PlotLabel : ○ None ● Manual PlotLabel : Sin(x)*Cos(y)
PlotPoints : ● Default ○ Manual PlotPoints :
(s)PlotRange : ● Default ○ Manual
(Optional) Z min:
(Optional) Z max:
(s)Shading : ● True ○ False
(s)ViewPoint : ○ Default ● Manual ViewPoint : {2,0,-1.5}
(s)Print Plot : ● No ○ Yes Redraw ? : No
(s)Ticks : ● Default ○ None

Animate : ● No ○ Yes
SpinOrigin :
Frames <15>:
Range <0>: Degrees To <360>: Degrees
RotateLight: ● No ○ Yes

Numerical and Scientific Software

SPSS/PC NEWS

Sandra Gardner
sgardner@vm.utcs.utoronto.ca

UTCS has received SPSS/PC+ V4.0 which replaces V3.1 as the current SPSS software for the PC. This version includes some new statistics procedures, enhancements to existing procedures, and a new optional module called CATEGORIES. All changes and enhancements will be described below.

SPSS Inc. has reorganized the BASE and ADVANCED STATISTICS modules of V3.1 into BASE, STATISTICS, and ADVANCED STATISTICS. When you install SPSS/PC+, you only need to install the modules which contain the statistical procedures you are likely to use. This might save you some hard disk space. For a summary of how the statistical procedures are organized, please see *Table 1*.

The changes to the BASE module include the new ADD VALUE LABELS command, which allows you to change labels without affecting existing value labels; KEEP and RENAME subcommands for GET and SAVE; grouped medians in the FREQUENCIES procedure; and support for LOTUS 3.0. CROSSTABS now produces several new statistics: kappa, relative risk ratio, Spearman's rank correlation coefficient, asymptotic standard errors, likelihood ratios chi-squared test, Mantel-Haenszel chi-square test for linear association, Goodman and Kruskal's Tau.

In the STATISTICS module, the REGRESSION procedure has been enhanced. The VARIABLES subcommand is now optional and the SELECTION subcommand is new. SELECTION aids in the selection of regressors. There is a new subcommand, COLLIN, for collinearity diagnostics. The TOL keyword gives exact counts rather than a range; the RESIDUAL subcommand has seven new values; and the SAVE subcommand has been improved to eliminate naming/saving of a variable. The FITS keyword has been added to SAVE so that influence statistics may be kept.

ADVANCED STATISTICS has three new procedures: LOGISTIC REGRESSION (actually released with V3.1); PROBIT; and SURVIVAL. LOGISTIC REGRESSION and PROBIT model relationships between a dichotomous dependent variable and a set of independent variables. SURVIVAL produces life tables, plots and related statistics for life table analysis.

A new procedure, X11ARIMA, has been added to the TRENDS module. This procedure provides state-of-the-art seasonal adjustment of time-series data. The TRENDS graphics procedures now support Harvard Graphics as well as Microsoft Chart.

DATA ENTRY II has several enhancements, including password protection and the ability to handle larger files in the same amount of workspace.

At the time of writing, the GRAPHICS module is not available. This module allows you to use external graphics packages such as Harvard Graphics and Microsoft Chart when you submit a GRAPH command. Please contact the Information Desk

Table 1

Statistical Procedures

BASE	STATISTICS	ADVANCED STATISTICS
Aggregate	Anova	Discriminant
Autorecode	Correlation	Hiloglinear
Crosstabs	Npar tests	Logistic Regression
Descriptives	Oneway	Loglinear
Examine	Regression	Manova
Flip	Ttest	NLR
Frequencies		
List	Cluster*	Probit**
Means	Factor*	Survival**
Plot	Reliability*	
Rank		
Report		
Sort		
Translate		

* formerly in Advanced Statistics Module
** new procedures

at 978-4990 to find out if the GRAPHICS module has been added to the rest of the software being circulated as part of UTCS's SPSS/PC+ site license.

The CATEGORIES module is a new option that adds a variety of optimal scaling and conjoint analysis procedures to SPSS/PC+. These techniques are used in marketing and survey research, and include correspondence analysis, nonlinear principal components analysis, and nonlinear canonical correlation analysis.

UTCS presently offers SPSS/PC+ V4.0 as a site license. The annual license fee is $100 per installation for the complete package; $40 per installation for DATA ENTRY II alone; and $50 per user on a network. If you currently have V3.0 or V3.1 installed, and have paid the 1990-91 license fee, you may upgrade to V4.0 at no extra cost. If you have not renewed for the 1990-91 period, you must pay the license fee in order to receive V4.0. Please contact the Information Desk at 978-4990 to arrange to borrow the diskettes to install or upgrade to V4.0.

UTCS also has installed SPSS-X V3 under CMS. The new mainframe version, SPSS 4.0, will soon be tested under CMS.

Version 4.0, PC and CMS, has all new manuals. For SPSS/PC+, there is a Base Manual and a separate manual for each optional module. You can purchase these manuals at the University of Toronto Bookstore.

If you have any questions about SPSS/PC+, please call me at 978-5128 or send an e-mail message to *sgardner@vm.utcs.utoronto.ca*

System Requirements:
(SPSS/PC+ V4.0)
IBM PC/XT, PC/AT, or PS/2, or closely compatible computer.
512 kilobytes (KB) RAM for BASE and STATISTICS, 640KB RAM for other options.
3.7 megabytes (MB) for BASE, 15.7MB for entire system licensed by UTCS.
V2.0 or later of PC/DOS or MS/DOS.
Only 64KB of expanded memory will be used by SPSS/PC+ V4.0.
Math coprocessor is not required but is useful to have.

Modules:
BASE, STATISTICS, ADVANCED STATISTICS, TRENDS, TABLES, DATA ENTRY II, GRAPHICS, CATEGORIES.

NAg FORTRAN Library Mark 14

Andrzej J. Pindor
apindor@vm.utcs.utoronto.ca

We have just received a new CMS version of the NAg FORTRAN Library, Mark 14. I will review the new version in a future issue of *ComputerNews*.

When we have installed the new version of the program in the near future, it will receive the status "new"; i.e., you will access it with the command "GETME NAG NEW". The NAg library Mark 13, which is currently the "new" version, will become "current". You will access it with "GETME NAG". The current version, Mark 11, will become "old". You will access it with "GETME NAG OLD". Eventually, the "old" version will be dropped. If you have any problems using NAg due to these changes, consult "HELP NAG", and if this does not help, call me at 978-5045 or send a note to *apindor@vm.utcs.utoronto.ca*

CHICO SOLVER Update

Andrzej J. Pindor
apindor@vm.utcs.utoronto.ca

In the September 1990 issue of *ComputerNews* (#265) I reviewed an interesting general-purpose equation solver for IBM and compatible microcomputers, CHICO SOLVER. The program has undergone several modifications since then, resulting in the recent release of version 2.0. CHICO Software Company has sent me a complimentary copy of the new version of the program and I liked the improvements, some of which address the problems I pointed out in my original review.

First of all, the program now has a modest graphics capability. When you do a parametric study, you can plot the behaviour of solutions as functions of the parameter. This is illustrated in *Figure 1*.

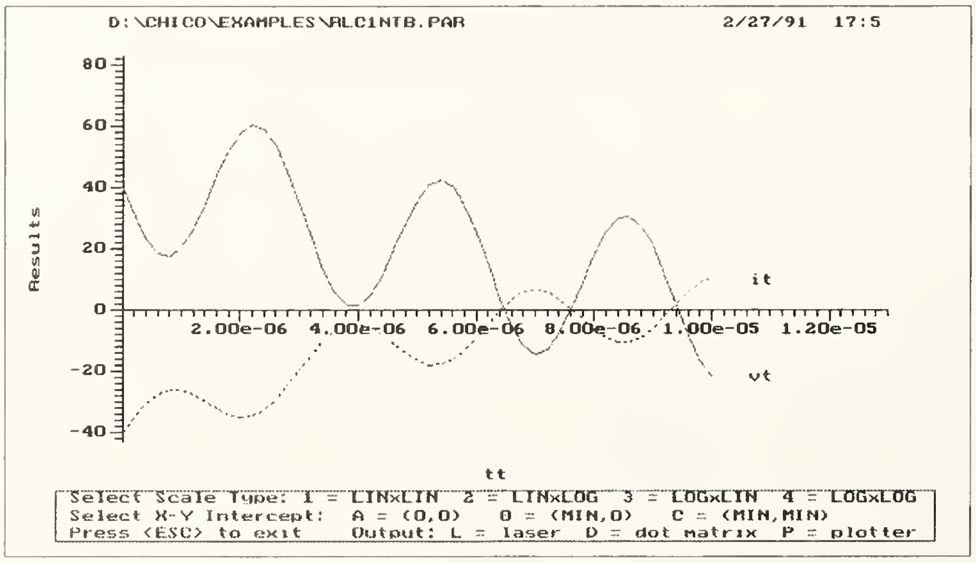
Secondly, the price of the software has been considerably reduced. CHICO SOLVER costs now US$299 for the full version. This includes one year of free updates and one year of unlimited telephone support. The student version still costs US$35 (I find this a real bargain).

Among the many additions to the program, the most interesting one is the capability for optimizing solutions. Any unknown parameter value may be selected and marked for minimizing or maximizing. The program searches for the solution yielding the best value for the user's optimization variable.

I ran into several small problems when I tested the graphics features of the program. The legend at the bottom of *Figure 1* indicates that you can obtain a hard copy of the graph using a dot matrix printer, a laser printer (HP LaserJet), and a plotter (Hewlett Packard Graphics Language—HPGL—plotter). At UTCS we have a QMS PS800+ laser printer that can emulate both an HP LaserJet printer and an HPGL plotter. The laser printer option worked fine but I was unable to generate a hard copy of the plot using the plotter option. Apparently, CHICO SOLVER would not accept the QMS emulation of an HPGL plotter as the real thing. There were no problems with the dot matrix printer (I had an Epson LQ-800 connected to my PC). Another problem I have encountered concerns axis annotation, which was somewhat confusing in certain situations. When I contacted the company about these problems, I found them very responsive and willing to help. The x-axis annotation problem apparently has been fixed in the newest update, and I was promised a new version of the program which should work also for the QMS laser printer emulating an HPGL plotter.

For more information about CHICO SOLVER, call Andrzej Pindor at 978-5045.

Figure 1: Parameter study option can be used to tabulate and plot solutions to a set of differential equations. The graph shows voltage and current in a driven parallel RCL circuit.



```
D:\CHICO\EXAMPLES\RLC1NTB.PAR                              2/27/91   17:5
```

```
Select Scale Type: 1 = LINxLIN  2 = LINxLOG  3 = LOGxLIN  4 = LOGxLOG
Select X-Y Intercept:  A = (0,0)   B = (MIN,0)   C = (MIN,MIN)
Press <ESC> to exit    Output: L = laser  D = dot matrix  P = plotter
```

Hardware Requirements:
IBM PC/AT or compatible, 512 kilobytes of RAM at least, 80x87 coprocessor and hard disk recommended.

Vendor:
CHICO Software Company
142 West Second Street
Chico, CA 95927-5174
USA
(916) 342-EASY

Pricing:
US$299 full version
US$35 student version
(site licenses and bulk discounts available)

A Step Towards Windows: Microsoft Word 5.5

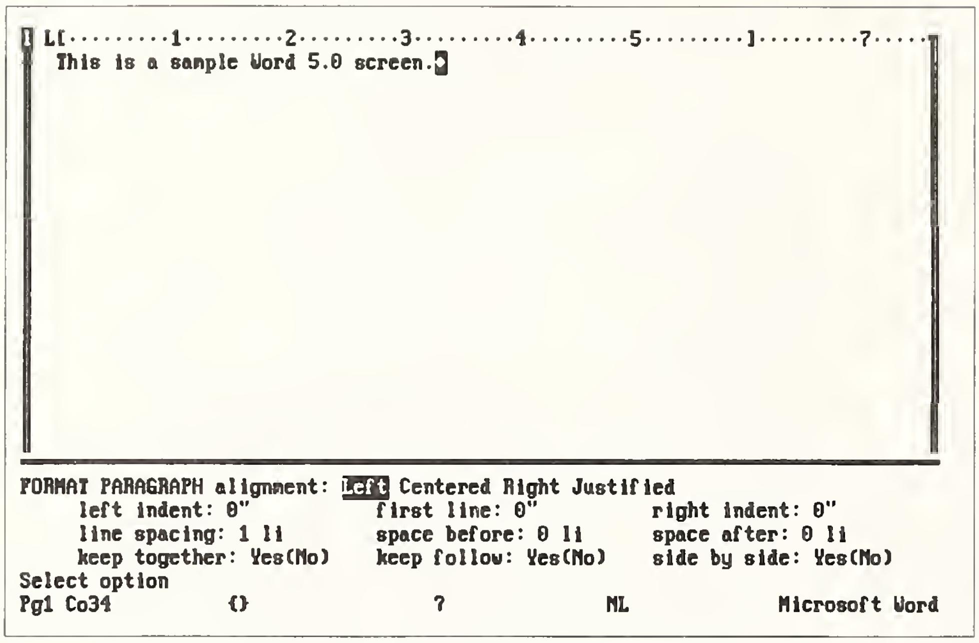
Harriet H. Ji
huaji@gpu.utcs.utoronto.ca

Recently, you may have heard a lot about Microsoft Windows 3.0, a graphical user interface that has revolutionized the look and operation of the PC. Briefly, Windows runs on top of DOS and gives a DOS-based PC a graphical user interface (GUI) so that it works more like a Macintosh computer. It creates a more graphically illustrated environment for the PC, hence the name "graphical user interface". Also, a PC with Windows is able to run more than one application at a time and allows you to transfer information between several applications. Programs and documents appear in windows on the screen (hence, the name) and you can move windows, change their sizes, open several documents at the same time, or switch between them with ease. Windows helps realize the ideal of WYSIWYG (What You See Is What You Get). PC users, especially beginners, no longer need to worry about memorizing abstract DOS commands, or about the limits of DOS.

Because of the advantages of Windows 3.0, all the major word processor manufacturers are competing to make their products Windows-based. Microsoft Canada Inc. has already marketed their Word for Windows version 1.1. WordPerfect Inc. in Utah announced plans for WordPerfect for Windows some time ago. You may have already received newsletters from your word processor dealers urging you to buy Windows and Windows-based software. Obviously, the age of Windows has arrived and sooner or later you will have to consider it.

Even though the trend is toward Windows-based products, the newest version of Word for the PC is NOT a Windows-based product. Why should you consider purchasing it if it's just another version of Word in the old DOS environment? Isn't it in your best interest to go directly to Windows and Windows-based software right away? Depending on your needs and the capabilities of your computer, this may not be true at all. Microsoft has made impressive changes to this version, enabling the MS-DOS version of Word to compete with more advanced word processing interfaces. The new screen appearance, interfacing file windows, drop-down menus, formatting ribbon, and several other impressive improvements make Word 5.5 a worthy choice for Word users. It is good transitional step for those users who want to stay with their DOS-based PCs before buying one capable of running Windows. It will cost you $549 to purchase Word 5.5, $75 if you are upgrading from Word 5.0, and $115 if you are upgrading from earlier Word versions. You can order Word 5.5 from Microsoft Canada in Mississauga, using the address given at the end of this article. The following paragraphs describe the major improvements made by Word 5.5 over 5.0,

Even though the trend is toward Windows-based products, the newest version of Word for the PC is NOT a Windows-based product.



```
LL·········1·········2·········3·········4·········5·········]·········7·····
 This is a sample Word 5.0 screen.

FORMAT PARAGRAPH alignment: Left Centered Right Justified
     left indent: 0"            first line: 0"          right indent: 0"
     line spacing: 1 li         space before: 0 li      space after: 0 li
     keep together: Yes(No)     keep follow: Yes(No)    side by side: Yes(No)
Select option
Pg1 Co34          {}               ?            NL              Microsoft Word
```

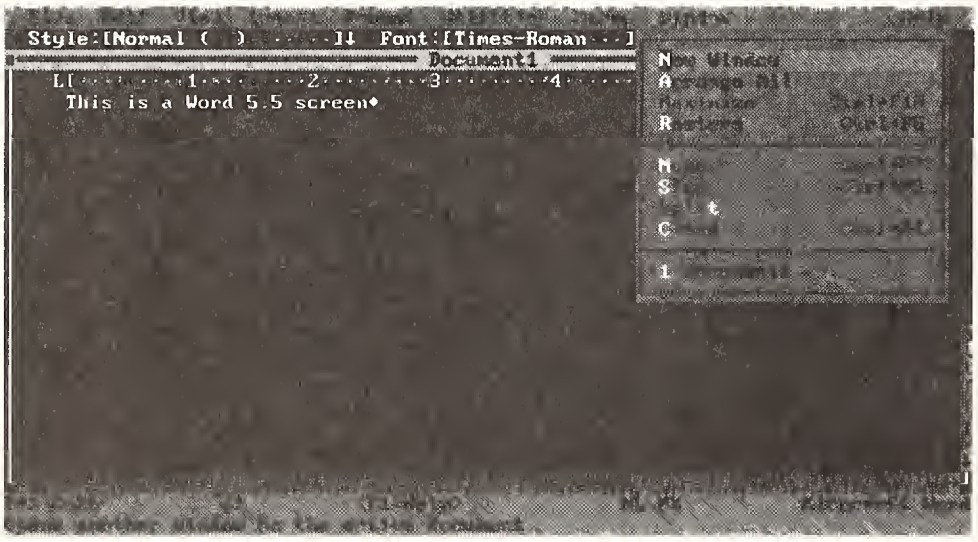
Sample screen from Microsoft Word 5.0.

and why Word 5.5 is a good transitional step for you if you are not yet ready to buy a Windows-based word-processing program.

What has changed in Word 5.5?

Interfacing Windows

One impressive feature of Word 5.5 is that Microsoft has standardized the design of its file windows with those of other major word processors, such as Word for Windows, and Word for the Mac. The standardization aims to help the user move with more ease between different word processors or computer systems. In Word 5.5, documents, style sheets, and help screens are displayed in separate, overlapping windows. Opening a new file opens a new window rather than clearing the existing window, as in Word 5.0. You can open as many as nine windows at a time and switch easily between them. The added scroll bars on the side and bottom of each document window allow you to scroll quickly through documents.



```
Style:[Normal (  )······]↓  Font:[Times-Roman···]
                    Document1
LL·········1·········2·········3·········4·····
 This is a Word 5.5 screen◆
```

Sample screen from Microsoft Word 5.5.

Drop-down Command Menu

The command menu of Word 5.5 "drops down" from the top of the document window and the <Alt> key is designed to access the command options. A formatting ribbon which lies parallel to the menu bar displays information about the font name, font size, style, and formatting applied to a selection. You can use the mouse or a keyboard command to get fast character formatting and style selections directly from the formatting ribbon. You can also choose to display the ruler, which indicates the left and right margins and tab stops for the current document at the top of the window. There are also a few changes in the terminology of Word 5.5 features. For example, Word 5.5 uses "Section" instead of "Division" for document formatting, and in the "Styles" feature, Word 5.5 replaces "Variant" with "Style ID" and "Usage" with "Style Type".

Keyboard and Mouse

There is a total reorganization of speed formatting keys in Word 5.5 to comply better with the Microsoft Windows standard. Many key assignments have changed to conform to the new keyboard standard used by Windows, and these make it easier to move between programs. For example, the <Alt> key activates the command menu, the <Ctrl> key activates speed formatting, and the <F1> key activates the online Help system. In addition, the <Del> key now erases a selection permanently in Word 5.5, while <Shift>+<Del> deletes a selection to the Scrap. Similarly, the <Ins> key now toggles with "overtype" mode, while <Shift>+<Ins> inserts text from the Scrap. Most mouse actions use only the left button of the mouse.

Macros and Glossaries

Word 5.5 also offers an improved "Macros" feature with which you can record complex or repetitive actions and carry them out with only a few keystrokes. Using the "Glossaries" feature, you can store frequently-used text by name, and insert the text by typing the name. In Word 5.0, when you chose the "Insert" command, both Glossary and Macro names were contained in the same list and could easily confuse you. Word 5.5 lists glossary entries and macros separately. To convert macros written in Word 5.0 to 5.5, Word 5.5 provides a converting package "**Macrocnv.exe**". The conversion utility reads a 5.0 glossary file, determines which glossary entries are macros, and converts the macros. The utility renames the original glossaries with the extensions .OLD, .OL1, or .OL2, to avoid overwriting.

Compatibility between various Word versions:

If you are using an earlier version of Word (version 3.0 or higher), all your document files (*.DOC), style sheets (*.STY), glossaries (*.GLY), and dictionaries created with the earlier Word versions are fully compatible with Word 5.5. If you prefer the command format of Word 5.0, Word 5.5 has an option which allows you to continue using 5.0 command menus and features.

What's in it For You?

These improvements allow the new version of Word to hold its own against Windows-based word-processors, but there are other reasons why you might decide to purchase it instead of a Windows-based product. For one thing, Windows requires a better and faster PC. You cannot take full advantage of Windows unless you have a suitable machine, such as a 386 model. Windows also requires one megabyte (MB) or more of memory, a hard disk with at least 6MB to 8MB of free disk space, a monitor that can support Windows, and a mouse. A computer with a 286 processor is too slow to run Windows software adequately.

Such considerations will make DOS popular among some PC users for a long while, possibly as long as for the next three to five years. If you are among those PC users, you should find Word 5.5 a good transitional step towards Windows. Both its good price and comfortable DOS environment will help you to make the best of your 286 PC, and its similarity to Word for Windows, as well as other Windows-based programs, will prepare you for the future.

For detailed information about Word 5.5, call Harriet Ji at UTCS at 978-6050.

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CorelDRAW 2.0

Terry Jones
tj@gpu.utcs.utoronto.ca

COREL Systems Corporation of Ottawa has had a winner in CorelDRAW since day one. CorelDRAW 2.0 is no exception. The program just keeps getting better.

CorelDRAW is designed for MS-DOS computers running Microsoft Windows 3.0. It is a comprehensive freehand illustration program that can manipulate both text and graphics with powerful but easy-to-use tools. Most of the tools are built into the program, but some come as "related programs" and are provided with CorelDRAW 2.0 when you purchase it or upgrade from an earlier release.

There are many new features in CorelDRAW 2.0. You can display non-printing guidelines on the screen to help you align objects precisely, and use the new "Snap to Grid" feature to make sure points and objects are exactly aligned on a user-definable grid, similar to most CAD programs. A new full-screen preview mode gives you a better idea of what you have created. Enhanced colour models let you choose Red Green Blue (RGB) or hue/saturation/brightness (HSB) modes, and much improved onscreen colour selection makes working with colour much easier. Move and nudge functions let you shift objects around with precision. Dotted and dashed lines, and new and user-created arrowheads are also available.

CorelDRAW 2.0 also comes with a new training video tape and an eight-lesson tutorial to help you get started. They have rearranged their clip art into 750 samples in 14 categories, making it much easier to locate what you are looking for. As well, over 3000 symbols in 36 categories are included. You can also create your own symbols.

Selecting a file using MOSAIC visual file manager.

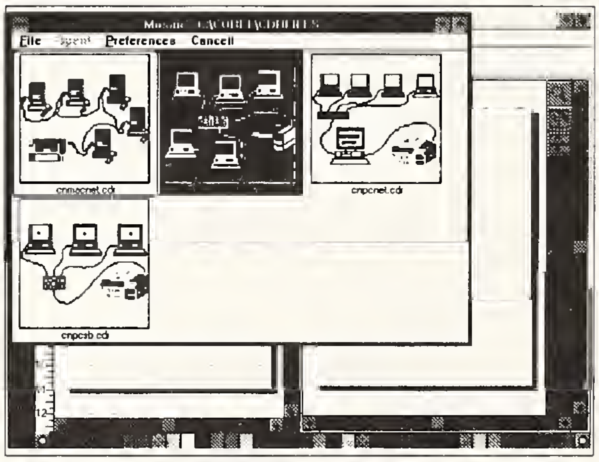
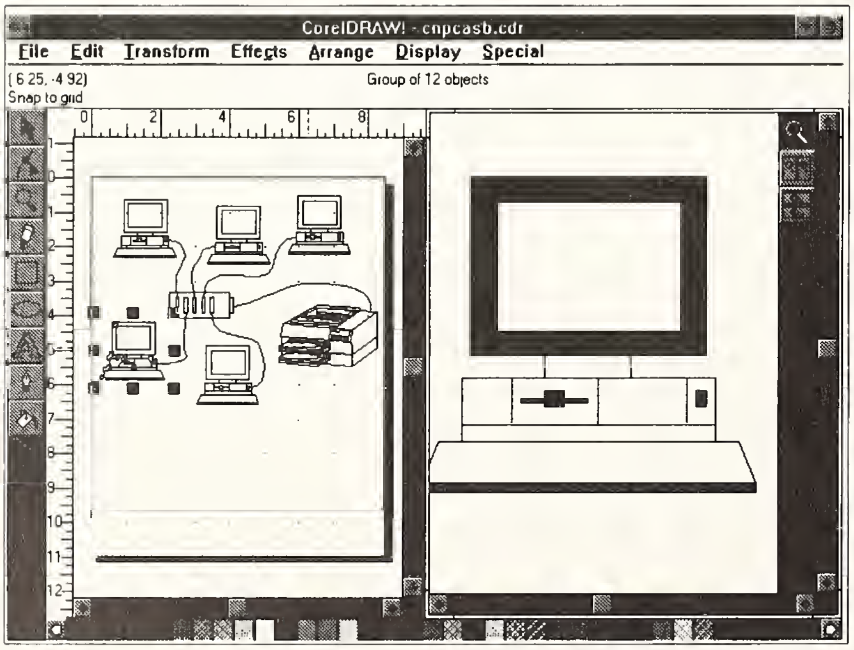
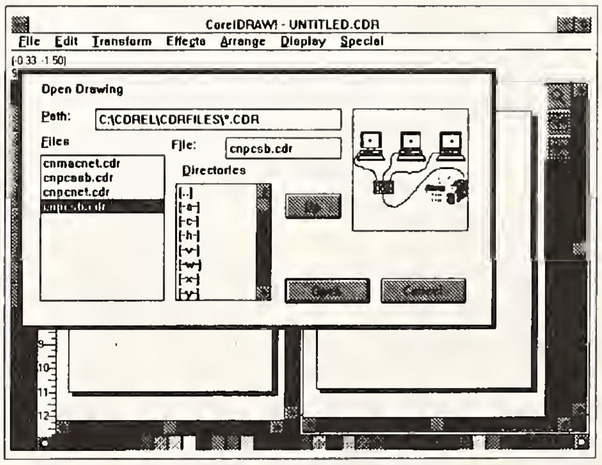


Figure below shows entire Editing Window (left side), Preview Window (right side), Color Palette (bottom), Status Line (top), Toolbox with drawing tools (left), and Preview Toolbox (right).



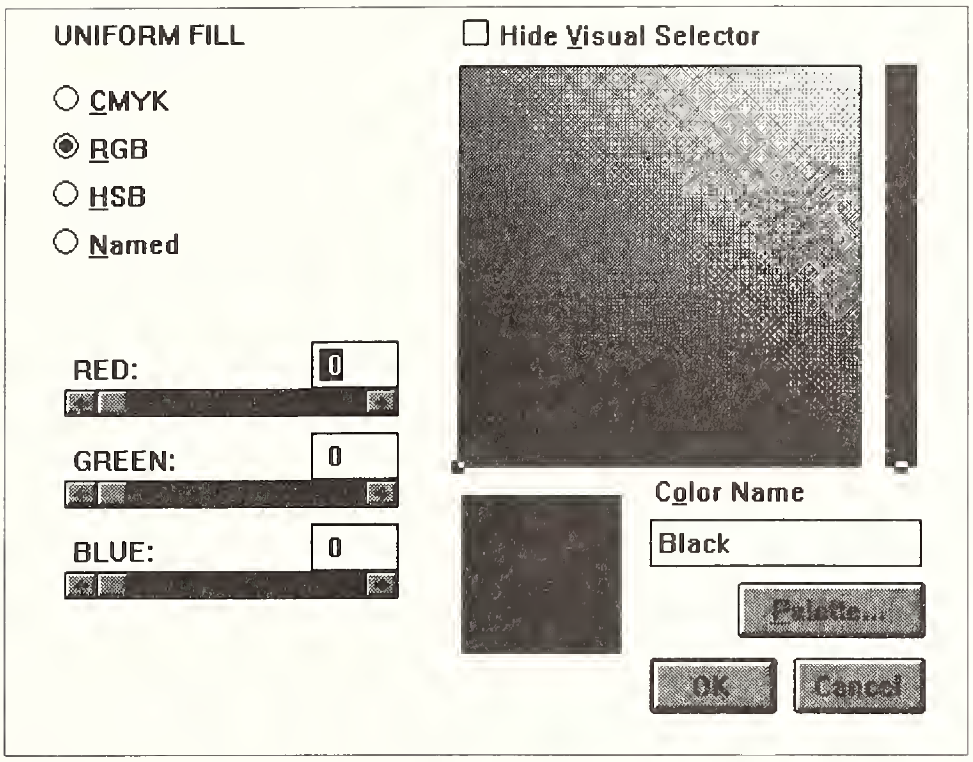
(6 25, -4 92)
Snap to grid
Group of 12 objects

Opening a file without MOSAIC still gives a preview of the file selected before you open it.



(-0 33 -1 50)

Path: C:\COREL\CDRFILES\*.CDR
File: cnpcsb.cdr



UNIFORM FILL

○ CMYK
● RGB
○ HSB
○ Named

☐ Hide Visual Selector

RED: 0
GREEN: 0
BLUE: 0

Color Name: Black

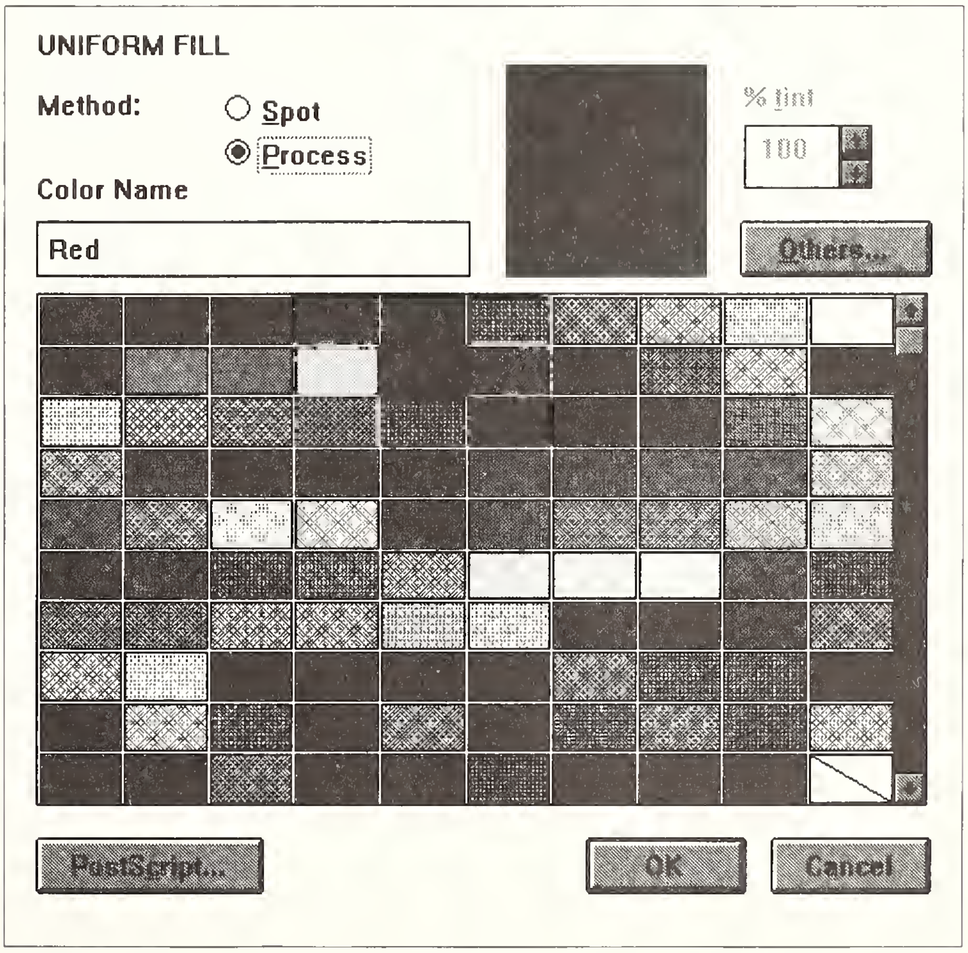
You can choose colours easily using HSB or RGB models.

The "related programs" that come with CorelDRAW 2.0 are **MOSAIC, CorelTRACE,** and **WFN BOSS.** MOSAIC is a new utility for CorelDRAW. It is a visual file manager that allows you to select a drawing, print a drawing, import one drawing into another drawing, or present a number of drawings in a slide show of their full-screen preview mode. CorelTRACE and WFN BOSS are not new, but they are improved. More options are available in CorelTRACE for tracing scanned images into object-oriented CorelDRAW files. WFN BOSS is a font conversion program that lets you import and now export fonts from other vendors into and out of CorelDRAW format. It is now called a "Typeface conversion and creation" program.

Current owners of registered copies of CorelDRAW can upgrade to version 2.0 by contacting Corel Systems in Ottawa at (613) 728-8200. The upgrade cost is approximately $125.

For more information about CorelDRAW 2.0 or for a demonstration, please contact Terry Jones at 978-4924.

Or, you can choose colours using the Color Palette.



UNIFORM FILL

Method: ○ Spot ● Process

Color Name: Red

% tint: 100

WordPerfect Licenses Now Cost Less!

Pat Hood
phood@vm.utcs.utoronto.ca

Because of changes in the School Software Program, WordPerfect now costs less! For 1991, all faculty and full-time students who purchase the retail version of WordPerfect products will each receive a CDN$120 rebate by mailing in a form provided with the software. Schools will receive donated software when they purchase retail versions of WordPerfect products.

How Does This Affect You?

First, faculty and full-time students can purchase WordPerfect products for use at home and receive a price rebate. There is a number of approved "Educational Dealers" in the downtown area who can provide you with the details.

Second, it is now less expensive to purchase new licenses from UTCS. UTCS is continuing to provide WordPerfect 5.1 to employees of the University for use on campus only. These licenses are owned by the University of Toronto, rather than the individual. (UTCS will not be providing licenses for other WordPerfect products.)

Third, WordPerfect documentation is now more widely available–dealers (including UTCS) can sell you extra reference manuals and workbooks, separate from the software. If you did not purchase documentation when you bought a new or upgraded license from UTCS, you can still purchase it. If your documentation has been lost or stolen, or if you require additional copies of documentation, you can now buy them from UTCS.

Obtaining the Software

The WordPerfect software will be distributed in the same manner as the other site licenses UTCS sells. The software is available on diskettes which you install on your hard disk. You may also make one copy for backup purposes. You must reserve the diskettes, in advance, by phoning the UTCS Information Office at 978-4990. A $25 deposit is required and this deposit is refunded when you return the diskettes.

Upgrading

To upgrade to version 5.1 of WordPerfect, bring the following to the UTCS Information Office, 4 Bancroft Avenue, Room 201:

1. The original title page of your WordPerfect Reference Manual.
2. Your WordPerfect serial number.
3. The type of keyboard you are using: standard or extended.
4. The size of diskettes you will need for installation.
5. A list of manuals you wish to purchase.
6. Your U of T Employee Number.
7. Payment, including deposit, in the form of cash, cheque, UTCS CAN, or U of T Appropriation Account.

Lower Prices at UTCS

The new UTCS pricing is as follows:

Software and Template

New WordPerfect License	$42.00
Upgraded License	$15.00

Documentation

Reference Manual	$39.00
Workbook	$24.00

Price Breakthrough!

Purchasing a New License

To purchase a new WordPerfect 5.1 license, bring the following to the UTCS Information Office:

1. Your U of T Employee Number.
2. The type of keyboard you are using: standard or extended.
3. The size of diskettes you will need for installation.
4. A list of manuals you wish to purchase.
5. Payment, including deposit, in the form of cash, cheque, UTCS CAN, or U of T Appropriation Account.

For More Information

If you require more information about WordPerfect 5.1 and its operation, contact Harriet Ji at 978-6050. For information about the availability of the licenses and software, or to book diskettes for installation, contact Evelyn Ward at 978-4990.

When your Mac is sick and your temperature's rising...

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Telephone Tips

The telephone set that sits on your desk or hangs on the wall has become so common that most people take it for granted. Punch a few numbers and you can go anywhere in the world. It does almost everything you want every time you use it. Sometimes, however, it does not behave the way we expect.

Here are some examples of the most frequently reported troubles with telephone sets or the telephone system.

"The telephone doesn't ring."

The ringer volume control switch on the Unity II sets is on the underside of the telephone set near the top right hand corner (the Unity II set is beige with grey buttons, and is probably the kind you have on your desk). There are five settings from very loud to no sound at all. In most cases, the slide switch has been moved to the no sound position. Slide the switch to the loudest position and have someone phone you to verify that it is working.

"My telephone is dead."

Some people see this as a blessing, but for most of us, the immediate feeling is "get this fixed, fast!" If this happens to you, you must determine whether the telephone or the line is dead. Take another telephone that you know works and plug it into the jack at the dead location. If you hear a dial tone, you know that the telephone is broken; if not, then the line itself is dead. It is important that the telephone being used for the test is the same type as the one at the dead location, since the Unity II set will not work in a jack dedicated for the Electronic Business Set (EBS) or the Meridian Business Set (MBS), and vice versa.

"My line won't disconnect."

When you are making several successive calls, you may occasionally have trouble disconnecting. If you depress the switchhook too quickly, you may cause it to perform like the "link" button on the Unity II set or the "Conf 3" key on the EBS and MBS sets. Your line has not disconnected but instead been put on hold, and the system thinks you want to place a conference call. To ensure the line has been disengaged, use the Release ("R" or "Rls") button on the set.

If you experience any problems with your telephone or line, call the Telephone Repair Line at 978-2000. Our staff are available from Monday to Friday 8:30 a.m. to 5:00 p.m. to solve your telephone troubles quickly.

Debbie Stewart
Voice Communications

UTCS MICROCOMPUTER COURSE DESCRIPTIONS

Irene Rosiecki
rosiecki@vm.utcs.utoronto.ca

UTCS offers various noncredit microcomputer courses to faculty, staff, and graduate students of the University of Toronto. These courses cover a number of software programs available for the PC or the Macintosh. Whether you will be typing a thesis on a word processor, or working with spreadsheets, databases, or desktop publishing, we may be able to help you get started.

Our class sizes are small to allow for much individual attention. Continuing support is available upon completion of a course.

To find out about course dates and registration procedures, or to book a place in any of these courses, please contact Irene Rosiecki at 978-4565. Courses are filled on a first-come, first-served basis. The more popular courses fill up quickly, but waiting lists are maintained in case of cancellations.

Databases

Introduction to dBASE IV

Learn the design concepts and practical skills needed to create a basic database application using dBASE IV.

The course is organized under five main topics:

- understanding databases
- presenting information
- organizing information
- database housekeeping
- finding information

Students will be shown techniques for creating and modifying database tables, data entry screens, reports, and queries using the dBASE IV work surfaces available through the Control Centre.

This course is an intensive, hands-on workshop. Experience on a PC is necessary.

Course Duration: 15 hours.

Introduction to FoxBASE+/Mac 2.01

This hands-on course will introduce you to the most commonly used features of FoxBASE+ on the Macintosh. Using both the View Window and the Command Window, you will learn to enter, access, filter, update, organize, and print your database information, as well as define relationships between databases.

Also covered are ways to modify the database structure, to customize FoxBASE+ to suit your needs, and to import and export data from and to other application packages.

Course Duration: 15 hours.

Desktop Publishing

Introduction to PageMaker

This basic hands-on PageMaker course covers the operations required to create and print simple publications containing graphics and text. You will learn how to set up master pages, margins, columns and other guides. PageMaker's text and graphics tools will be covered, as well as how to place text and graphics prepared in other programs. These skills will be combined in the creation of complex documents.

The course is taught on Macintosh computers, but people using PageMaker on the IBM can attend as the two programs are almost identical.

Prerequisite: Intermediate-level computing experience (word-processing preferred).

Course Duration: 10 hours.

Operating System

Introduction to DOS

This hands-on course covers the most important features of the Disk Operating System (DOS), Version 3.3, used on IBM PCs and compatibles. You will learn the commands necessary for proper file management and data protection. A basic acquaintance with IBM microcomputer concepts is assumed (for example, hardware components; computer memory and function of disks; files and directories).

Topics include: formatting disks; file naming conventions; commands for copying, deleting, or renaming files; paths and the directory hierarchy; write-protecting and backing up data; estimating space requirements.

Prerequisite: Experience with at least one application on an IBM-PC or compatible computer.

Course Duration: 10 hours.

Hypermedia

Introduction to HyperCard

HyperCard gives the Macintosh user the ability to organize and present information. With HyperCard you can create teaching materials, maintain address books, or organize information.

Students will be introduced to HyperCard's browsing and authoring tools. At the end of the seminar, you will be able to use or modify existing HyperCard based applications, and create simple applications yourself.

Prerequisite: Experience on the Macintosh is necessary.

Course Duration: 6 hours.

Spreadsheets

Excel on the Macintosh

We offer an Excel course for Macintosh users who want to use a spreadsheet package. You will learn to design a spreadsheet; input, edit and format data; and manipulate the data to produce charts and reports. Once you have entered some data, you will be able to print and save the spreadsheets. Instead of repeating keystrokes manually each time you need to perform a task, you will be able to create macros that will playback those repetitive functions. Hands-on exercises are provided throughout the course.

Course Duration: 15 hours.

Introduction to Lotus 1-2-3

This hands-on introductory course focusses on Lotus 1-2-3, a spreadsheet package for the IBM PC. Students are introduced to the basic concepts of data editing and formatting for the creation of spreadsheets.

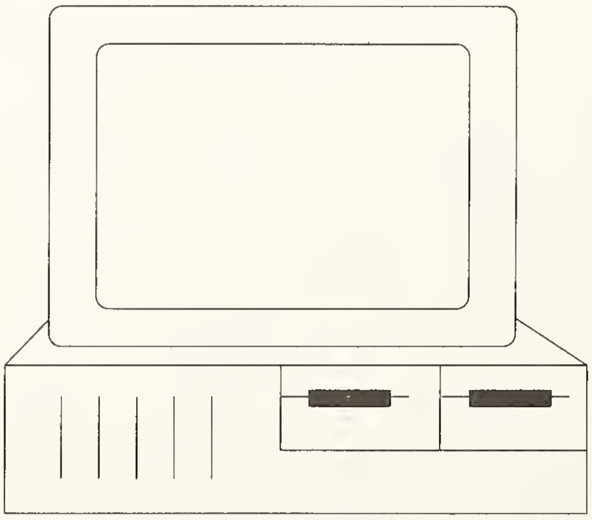
Topics include: terminology of spreadsheets; keyboard layout; data input, editing, and formatting; commands for manipulating, printing, and saving spreadsheets; built-in functions; graphs; introduction to ALLWAYS.

Course Duration: 15 hours.

Statistics

Introduction to SAS on the PC

This course is an introduction to using SAS on a personal computer, aimed specifically at new SAS users. Hands-



on exercises are provided throughout the course.

Topics include: introduction to the SAS language in the DOS environment; using the display manager; online help; SAS data sets; advanced data set manipulation; introduction and use of various SAS procedures; exploratory data analysis and presentation; creating and using permanent SAS data sets.

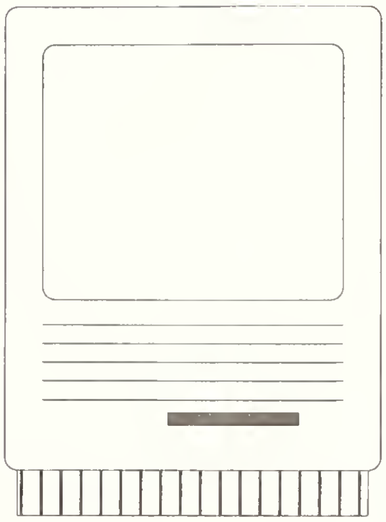
Course Duration: 10 hours.

Intermediate SAS Statistics

This hands-on course focusses on the statistical procedures included in SAS/PC. While some background in applied statistics would be helpful, it is not essential as the emphasis of the course is the SAS language, not statistical theory.

Topics include: testing experimental assumptions (PROCs UNIVARIATE and PLOT), independent and paired t-tests (PROC TTEST); nonparametric tests (PROC NPAR1WAY); use of PROCs CORR, ANOVA, GLM, REG, FREQ, and CATMOD in various applications including one-way analysis of variance, multiple comparisons, factorial designs, manova, analysis of covariance, methods of stepwise regression, repeated measures designs, partial correlation, categorical data analysis, and logistic regression. A summary of multivariate analysis techniques such as factor analysis and cluster analysis (PROCs FACTOR, CLUSTER, etc.) will also be presented.

Each procedure is examined in the context of sample data. Discussion will concentrate on the types of situations that SAS can handle, available options, and output interpretation.



Prerequisite: Introduction to SAS, or equivalent experience with SAS.

Course Duration: 15 hours

Intermediate SAS Data Processing

This course deals with the data processing aspects of SAS. The use of SAS for processing data is demonstrated using a combination of lectures and hands-on practice with sample problems.

Topics include: SAS INFORMATs and FORMATs; pointer controls; DATA step control structures such as DO, LINK, and SELECT; special functions; recoding data using PROC FORMAT; reducing data using PROC SUMMARY; producing reports using PROC PRINT and PROC TABULATE; dealing with external files using INPUT and PUT; importing dBASE and Lotus files using PROC DBF and PROC DIF; rearranging data with DATA steps and PROC TRANSPOSE; portability considerations including SAS version 5 and version 6 differences, PROC CPORT and PROC CIMPORT, and methods of transferring data; data set handling using MERGE, UPDATE, POINT, and conditional use of the SET statement.

These topic areas are explained and expanded on using sample data, and SAS, dBASE, and Lotus on the PC.

Prerequisite: Introduction to SAS, or equivalent experience with SAS.

Course Duration: 15 hours.

SAS/GRAPH Seminar

This seminar will introduce SAS/PC users to SAS/GRAPH, SAS' high-resolution graphics package. This seminar has been designed to help those who have installed SAS/GRAPH but have never run any of the procedures.

Topics include: SAS/GRAPH versus other graphics packages, types of graphs that can be produced by SAS/GRAPH; graphics display options for your monitor, printer or plotter; saving graphs permanently and replaying them at a later date; SAS catalogues and libraries, displaying multiple graphs on a page; annotating your graphics.

Prerequisite: Introduction to SAS or equivalent experience with SAS.

Course Duration: 4 hours.

Call 978-4565 to enquire about course dates and times. Classes tend to fill up quickly, so call now!

Word Processing

Microsoft Word on the Macintosh

Receive a thorough knowledge on the basic use of the Macintosh, and of some of the editing and formatting capabilities of Microsoft Word version 4.0. Continuous hands-on practice is provided for the material being taught. Upon completion of the course, you will be able to create simple reports, memos, research papers, and articles.

Topics include: introduction to the Macintosh; keyboard layout; text editing and formatting (letters, memos); preparation of simple reports (excluding complex tabular material); simple research papers.

Course Duration: 16 hours.

Microsoft Word for the PC

This course is aimed at users who want to learn the editing and formatting capabilities of Microsoft Word version 5.0. Continuous hands-on practice is provided for the material taught. Skills learned in the course can be applied to the creation of memos, letters, simple reports, research papers or articles containing footnotes. You will also learn how to merge a form letter.

Topics include: introduction to the PC; text editing and formatting commands; fonts; document printing options; box and line drawing; form letters.

Course Duration: 15 hours.

Introduction to WordPerfect 5.1

Learn the latest version of the most popular word-processing package. This introductory WordPerfect course will teach you how to prepare text or simple manuscripts using WordPerfect version 5.1. Designed to meet the needs of administrative staff, academics, and students who want to learn the editing and formatting capabilities of WordPerfect.

Topics include: introduction to the PC; the WordPerfect template and pull-down menu; text editing and formatting commands; document printing options; footnotes; search and replace; spell-checking; headers and footers; table feature.

Course Duration: 15 hours.

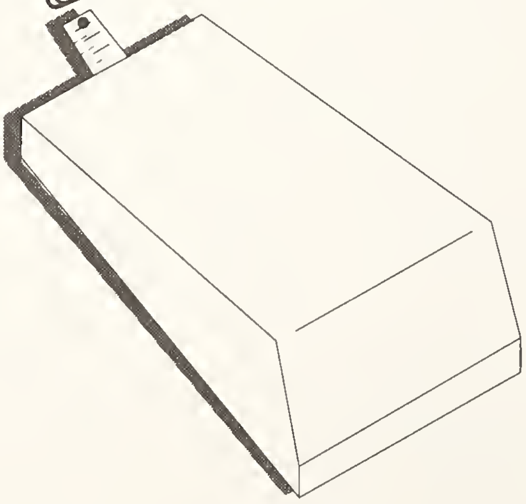
Advanced 5.1 WordPerfect Topics

This course is intended for people already using WordPerfect version 5.1 who wish to familiarize themselves with special WordPerfect functions.

The following functions will be taught in this course: program setup, macros, mailing lists (merge), sorting, labels, style, graphics and equations.

Prerequisite: Introduction to WordPerfect 5.1, or previous experience with WordPerfect 5.1.

Course Duration: 10 hours.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UTCS Services

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Administrative Computing
- administrative IMS, DB2, Batch, and TS0
- 3081K processor, 48 megabytes of memory
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SUN 3/280s, 16 megabytes of memory (zero.cdf)
- Computer Science interactive access
- SUN UNIX 4.0.3

SUN 3/280s, 16 megabytes of memory (one.cdf)
- Computer Science interactive access
- SUN UNIX 4.0.3

Computer Disciplines Facility/PC
- 88 NEC computers connected in a Local Area Network:
  - Robarts Library (Rm. 1061A): 36 NEC PCs
  - St. Michael's College (Rm. 107): 26 NEC PCs
  - Sidney Smith (Rm. 1071): 23 NEC PCs
  - Trinity College (Rm. 024) 3 NEC PCs
- MS-DOS with Turing environment
- introductory computer science

Computers in Quantitative and Empirical Science Teaching (CQUEST)
- 52 DEC VT1000 X-window terminals, 20 DEC 2100 workstations connected in Local Area Network:
  - Ramsay Wright (Rm. 211, 213): 29 DEC VT1000s, 10 DEC 2100s
  - Sidney Smith (Rm. 2105): 20 DEC VT1000s, 10 DEC 2100s
  - Departmental use: 3 DEC VT1000s

Public Sites
- 50 XT100 terminals connected to PACX
  - Robarts Library (Rm. 1061A): 24 terminals
  - Engineering Annex (Rm. 107B): 12 terminals
  - St. Michael's College (Rm. 107): 9 terminals
  - Victoria College (1st floor): 3 terminals
  - Trinity College (Rm. 024): 2 terminals

Erindale College Systems
SUN 3/280, 16 megabytes of memory
- instructional and research access using UNIX

VAX 8200, 8 megabytes of memory
- instructional access using VMS
- research access

Institutional Relations System

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- database services to the owner departments using VMS

EPAS Facility
- 4361-5 processor, 16 megabytes of memory
- general VM/CMS services to the owner departments

Ontario Centre for Large Scale Computation (OCLSC)
- Cray Research Inc. X-MP/24
- 2 processors, 4 megawords main memory
- solid state disk (SSD) with 64 megawords of storage
- UNICOS 5.1.11 operating system
- VAX 8350, MicroVAX II, VAXstation 3200, and SUN-3/280 provide front-end services

The mandate of UTCS is to encourage and support the use of information technologies across campus, and to plan, implement, and operate common-carrier networks and certain appropriate central computer facilities.

UTCS Centrally Owned and Managed

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IBM VM/CMS
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- CP operating system, VM/SP HPO R5
- CMS timesharing system, VM/SP Release 5
- FTP and TELNET access to the campus ethernet, as well as Internet
- RSCS spooling system, Release 2.3

GP UNIX
Technical Assistance: 978-8853
- General Purpose Timesharing under SUN UNIX 4.1.1
- SUN 4/490, 32 megabytes of memory
- access to Linotronic typesetter
- full access to USENET, an electronic technical information exchange facility
- full access to the Internet, UUCPNET, BITNET, CDNNET

Services

Communications, Networking & Technical Support
Primary Phone: 978-7087
- Communications Group provides communications systems, terminals, modems, data channels: consulting and installation.
- Field Service Group installs and maintains communications and computer systems, particularly IBM PCs and Macintoshes, on a contract basis or on a cost-per-call basis.
- provides consulting on computer systems technology and installs computer systems
- provides access between the IBM systems and machines using UNIX, VMS and other operating systems. Ethernet, Pronet, and IBM TRN technologies are used over various transmission media including optical fibre. More basic communications techniques are also used for moderate speed links.
- provides consulting on local area networking and installs LANS
- provides access to NetNorth (BITNET), the North American Universities Network; ONET, the Ontario Regional Network; CA*net, the Canadian National Network; and USENET, the UNIX networking fraternity
- provides gateway to the US Internet
- will provide a communications solution to department needs on a contractual basis

Information Centre
Primary Phone: 978-HELP
- Provides assistance in use of electronic messaging, including use of Local Area Networks (LANS); NetNorth/BITNET/EARN, the world Universities network; CDNNET, the Canadian X.400 network; ARPANET; CSNET; USENET; and other international connections.
- provides advising, consulting and documentation on:
  - command languages, including CMS and UNIX
  - high-level languages, including FORTRAN, and C
  - packages and libraries, including SAS, SPSS, BMDP, IMSL, and NAg
  - editors and formatters, including XEDIT, ed, nroff/troff
- provides general micro support
  - selection consulting for hardware and software
  - Micro Lab for evaluation of hardware and software
  - advice on University discounts
  - media conversion and data transfer
  - CD-ROM access to software and information discs
  - offers PostScript Laser Printing Service
  - offers 35mm slide production service using Polaroid Palette
  - administers Local Area Network of PCs for Education Facility
  - administers Macintosh Education Facility
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- provide image and typed text scanning
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- administers site licenses for various software packages
- provides short courses and seminars on the more popular services and software packages

Telephone Listings

Consulting and Enquiries

Applications Support & Advising Supervisor	Alex Nishri	BC214	978-7109
External Marketing Consultant	Ihor Prociuk	BC217	978-6875
Erindale College	Joe Lim	ER2035	828-5311
Information Office	Evelyn Ward	BC201	978-4990
Account & Access Code Enquiries	Phillip Mun	BC101B	978-7148
IBM & Macintosh Maintenance	Kam Mark	BC103	978-5050
Tape Library (Academic Services)	Susan Kovago	MP368	978-7319
Tape Library (Administrative Services)	Miranda Fong	MP368	978-6693
Communication, Networking & Hardware	Rosi Derka-Tseu	BC105	978-7087
UTCS Noncredit Short Courses	Irene Rosiecki	BC217	978-4565

Consulting & Advising Services:	978-HELP
CMS, and GP UNIX userids:	ADVISOR
CMS Userid for mail problems:	POSTMSTR
Network Operations Centre	978-4621
System Status Enquiries (GP UNIX)	978-4318
System Status Enquiries (IBM)	978-7393
Interactive Services 300 (bps)	978-3959
Interactive Services 1200 (bps)	978-3959
Interactive Services 2400 (bps)	978-7239
Interactive Services 9600 (bps)	978-7220

UTCS Directory

Director:	Dr. Warren Jackson	BC118	978-8948	wcj@vm.utcs.utoronto.ca
Associate Director:	Eugene Siciunas	BC116	978-5058	eugene@vm.utcs.utoronto.ca
Managers:				
Communications & Technical Support	Norman Housley	BC121B	978-4967	norman@vm.utcs.utoronto.ca
Information Centre	Don Gibson	BC217	978-7331	don@vm.utcs.utoronto.ca
Internal Systems Support	Ron Vander Kraats	BC121A	978-4428	rvk@vm.utcs.utoronto.ca
Operations Support	Dr. Bob Chambers	MP350	978-7092	
Systems Support	Bill Lauriston	MP331	978-3579	bill@vm.utcs.utoronto.ca

Committees on Computing

Supercomputer Users' Group at U of T	Chair	Prof. W.R. Peltier	978-2938
Research Board Standing Committee on Computing	Chair	Prof. C.C. Gotlieb	978-2986

Legend:
BC = Bancroft Building
ER = Erindale
MP = McLennan Physical Labs

* NetNorth/BITNET/EARN

Terminal & Advising Sites

Names and Locations

Central Advising Office (CAO), 978-HELP
Engineering Annex (EA, CDF), 11 King's College Road, Rooms 107, 107B, 201
Erindale College (Erin), 828-5339, 3359 Mississauga Road North, Erindale Campus, Rooms 2037, 2039A-B-C, 2045
Ramsay Wright, 25 Harbord St., Rooms 211, 213
Robarts, Robarts Library, 130 St. George St., Room 1061A
Sidney Smith (Sidney), 100 St. George St., Room 1071, 2105
St.Michael's College, 121 St. Joseph St., Room 107
Trinity College, 6 Hoskin Ave., Room 024
Victoria University, 73 Queen's Park Cres., 1st floor

Access Hours

Sites	Hours of Access				Restrictions*	Advising
	Mon-Thurs	Fri	Sat	Sun		
CAO	10:00-18:00	10:00-18:00	closed	closed	Research	978-HELP
CDF	24 hrs	24 hrs	24 hrs	24 hrs	Undergrads	No
EA	24 hrs	24 hrs	24 hrs	24 hrs	None	978-HELP for Research
Erin (2039)Δ	9:00-17:00	9:00-17:00	12:00-16:00	12:00-16:00	Research	Rm 2005
(2045-46-47)	24 hrs	24 hrs	24 hrs	24 hrs	Undergrads	Rm 2005
(235)†	8:00-22:00	8:00-17:00	closed	closed	None	Rm 2046
Ramsay Wright	7:00-21:00	7:00-18:00	closed	closed	Undergrads	No
Robarts	8:30-24:00	8:30-24:00	9:00-22:00	13:00-22:00	None	978-HELP for Research
Sidney	7:00-24.00	7:00-24:00	7:00-24:00	7:00-24:00	None	978-HELP for Research
St.Michael's	24 hrs	24 hrs	24 hrs	24 hrs	None	978-HELP for Research
Trinity	8:00-23:00	8:00-23:00	closed	closed	None	978-HELP for Research
Victoria	8:30-21:00	8:30-21:00	8:00-13:00	8:00-13:00	None	978-HELP for Research

Sites	Advising Hours
CAO	Monday through Friday, 10:00 - 18:00
Erin	Monday through Friday, 09:00 - 22:00

Legend

* Research includes graduates, faculty, staff.
Δ Key access available.
† Access restricted to building hours.

Computer and Printer Access

Sites	PACX	CDF/PC	CQUEST	Printers
CDF				Y
EA	Y			Y*
Erin	Y			Y*
Ramsay Wright			Y	Y**
Robarts	Y	Y		Y*
Sidney		Y	Y	Y**
St.Michael's	Y	Y		Y*
Trinity	Y	Y		
Victoria	Y			

(Y=yes, N=no)
* Public Printers **Site Only

UTCS Site Licenses

UTCS administers a number of software site licenses available to the University of Toronto community. (Usually, this means faculty, staff, and graduate students, though some licenses apply to undergraduate students also. See "Restrictions" in the table below.) The licenses provide a variety of software at much-reduced cost. The majority of the licenses must be renewed each year. Most are terminated when you leave U of T.

Each license has a contract that you must complete. It outlines your responsibilities and any limitations in the use of the software. Except for ProComm, the contracts and software are available from the UTCS Information Office, 4 Bancroft Avenue, Room 201. ProComm is available from the UTCS Advising Office, 978-HELP. To qualify as a member of the U of T community, you must provide a valid Employee number or Student number.

The table below describes the available site licenses. The Restrictions column specifies who may purchase the license. If the restriction is Research, the payment must come from research money. The Diskettes column describes how you actually receive the software. Large packages, like SAS and SPSS, require that you borrow the diskettes, install the software, and return the diskettes. Smaller packages, consisting of up to five diskettes, either require you to bring your own diskettes or include the cost of the UTCS-supplied diskettes in the license fee.

For more detailed information about these site licenses, telephone the UTCS Information Office at 978-4990.

Site Licenses at UTCS

Product Name	***Archivist***	***Chaos in the Classroom I: Maps and Bifurcations***	***ProComm***
System	PC; Text management	PC;	PC; Communications
Restrictions	Faculty, Staff, Graduate Students	Faculty, Staff, Graduate Students	Faculty, Staff, Graduate Students, Undergraduate
Cost	$40	$12	Free
License Period	One-time fee	One-time fee	N/A
Diskettes	One 5.25"; bring own	One 5.25" or one 3.5"; bring own	Two 5.25"; bring own
Documentation Available at UTCS	No	Yes	On disk; part of package
Product Name	***QuickMail***	***SAS/PC***	***SAS/PC network***
System	Mac; Electronic mail	PC; Statistical analysis	PC; Statistical analysis
Restrictions	Faculty, Staff	Faculty, Staff, Graduate Students, Undergraduate	Faculty, Staff, Graduate Students
Cost	$35 per user Upgrades: $10	BASE/STAT/GRAPH/FSP: $70; IML module: $20; ETS module: $35.	$35 per station
License Period	One-time fee	July 1-June 30	July 1-June 30
Diskettes	One 3.5"; bring own	Deposit per binder Maximum $350	Deposit per binder Maximum $350
Documentation Available at UTCS	No	Yes	Yes

Site Licenses at UTCS *cont.*

Product Name	***SAS/UNIX***	***SPSS/PC***	***SYSTAT***
System	UNIX; Statistical analysis	PC; Statistical analysis	Mac; Statistical analysis
Restrictions	Faculty, Staff, Graduate Students	Research	Faculty, Staff, Graduate Students
Cost	$150 BASE; $50 ea. FSP, IML modules	$100	$100
License Period	July 1-June 30	Nov 1-Oct 31	July 1-June 30
Diskettes	Tape cartridge	Deposit $25 per box; 2-3 boxes	Five 800KB 3.5" diskettes; bring own
Documentation Available at UTCS	Yes	No	Yes

Product Name	***WATFOR-77***	***WordPerfect***	
System	PC; FORTRAN compiler	PC; Word Processing	
Restrictions	Research	Faculty, Staff	
Cost	$35 [$35 WATFOR-87 (math co-processor)]; Add $5 GKS (Graphics Kernal System)	New: $42 Upgrade: $15	
License Period	July 1-June 30	One time fee	
Diskettes	Two-three 5.25" diskettes; bring own	Deposit $25 per box; 1 box	
Documentation Available at UTCS	Yes	Yes	

Software List for Microcomputers

The following are microcomputer software packages for which UTCS can provide either support or some information. As with mainframe products, micro packages receive full support (Class A), limited support (Class B), or no active support (Class C). The specific criteria differ from those for mainframe classes and are outlined in the Academic's Guide to Microcomputer Systems.

Package/Compiler	Version	Environment	Support
Application Development Tools			
Assembler			
Microsoft Assembler	5.1	MS-DOS 3.3 & OS/2	B
MPW Assembler	2.0.2	Macintosh	B
BASIC			
GW BASIC	—	MS-DOS	B
C			
Microsoft C	5.1	MS-DOS	B
MPW C	2.0.2	Macintosh	B
WATCOM C & Express C	6.0	MS-DOS	B
Modula-2			
JPI Top Speed Modula-2	1.17	MS-DOS	B
Metacom Modula-2	1.0	Macintosh	C
FORTRAN			
IBM FORTRAN/2	1.0	MS-DOS 3.3 & OS/2	B
Language Systems FORTRAN	1.0	Macintosh	C
Microsoft FORTRAN	4.0	MS-DOS	B
WATCOM WATFOR-77	3.0	MS-DOS	A
Pascal			
MPW Pascal	2.0.2	Macintosh	C
TURBO Pascal	—	MS-DOS	B
HyperCard & HyperCard-like Tools			
ConvertIT!	1.0	Mac/MS-DOS	B
HyperCard	1.2.5 & 2.0	Macintosh	A
Linkway	1.01	MS-DOS	B
SuperCard	1.5	Macintosh	B
ToolBook	1.0	MS-DOS	B
Utilities & Shells			
ResEdit	1.2	Macintosh	B
Macintosh Programmer's Workshop	2.0.2	Macintosh	B
WATCOM GKS	1.3	MS-DOS	B
Bibliographic Software			
Archivist	1.02B	MS-DOS	C
Endnote Plus	1.0	Macintosh	B
Library Master	1.0	MS-DOS	B
Notebook II	3	MS-DOS	B
Pro-Cite for Macintosh	1.33	Macintosh	B
Pro-Cite for IBM PC	1.4	MS-DOS	B
Reference Manager	1.02	Macintosh	C
Reference Manager	4	MS-DOS	C

Software List for Microcomputers cont.

Package/Compiler	Version	Environment	Support
Communications			
File Transfer & Terminal Emulators			
Kermit	0.8(35)	Macintosh	A
Kermit	2.30	MS-DOS	A
DeskLink	2.21c	MS-DOS	B
Lap-Link Mac	2.00a	Macintosh	B
Lap-Link PC	2.16	MS-DOS	B
MacTerminal	2.2	Macintosh	B
PC TALK3	—	MS-DOS	C
PC PLOT III	—	MS-DOS	C
ProComm	TU 2.4.2	MS-DOS	A
Red Ryder	10.3	Macintosh	B
Remote^2	1.01	MS-DOS	B
Network Systems			
3COM PLUS	1.3.1	MS-DOS	B
AppleShare	2.0.1	Macintosh	B
Novell Advanced Netware	2.15	MS-DOS	B
PC LAN	1.3	MS-DOS	B
STARLAN	3.1	MS-DOS	B
Tapestry II	1.1B	MS-DOS	B
TOPS	2.1	Macintosh	B
TOPS	2.1	MS-DOS	B
TOPS NetPrint	2.1	MS-DOS	B
Network System Utilities			
Inter•Poll	1.0.1	Macintosh	B
Database Managers			
4th Dimension	Int. 1.03	Macintosh	B
AskSam	4.2	MS-DOS	B
Clipper	S87	MS-DOS	B
DATAEASE	2.5R3	MS-DOS	B
dBASE IV	1.1	MS-DOS	A
FileMaker II	1.1	Macintosh	B
FoxBASE Mac	2.01	Macintosh	A
FoxPro	1.0	MS-DOS	B
Oracle	5.1B	MS-DOS	B
Oracle for Macintosh	1.1	Macintosh	B
R & R Report Writer	3.0	MS-DOS	C
Desktop Publishing			
Fontographer	n/a	Macintosh	C
PageMaker	4.0	Macintosh	A
PageMaker	3.0	MS-DOS	A
PageMaker	3.0	OS/2	C
Quark XPress	1.0	Macintosh	C
Ready,Set,Go!	4.0	Macintosh	C
Ventura	2.0	MS-DOS	B
Electronic Mail			
Microsoft Mail	1.36	Macintosh	B
QuickMail	2.3.2	Macintosh	B
Graphics			
Charting			
35mm Express	4.02	MS-DOS	B
Cricket Graph	1.2	Macintosh	C
DeltaGraph	1.5	Macintosh	B
Freelance Plus	3.0	MS-DOS	B

Software List for Microcomputers *cont.*

Package/Compiler	Version	Environment	Support
Harvard Graphics	2.1	MS-DOS	B
Lotus 1-2-3	2.01a	MS-DOS	B
Microsoft Excel	1.5	Macintosh	B
Microsoft Excel	2.0	MS-DOS	B
SigmaPlot	—	MS-DOS	C
Draw and CAD			
Aldus Freehand	1.0	Macintosh	B
Cricket Draw	1.1	Macintosh	C
Generic CADD	3.0	MS-DOS	C
MiniCad	4.05	Macintosh	C
Illustrator88	1.6	Macintosh	B
MacDraft	1.2b	Macintosh	C
MacDraw	1.95	Macintosh	A
MacDraw II	1.0v1	Macintosh	B
Windows Draw	1.02	MS-DOS	C
Image and Scanning			
Corel Draw	2.00	MS-DOS	B
ImageStudio	1.05	Macintosh	B
Publish Pac	2.0	Macintosh	B
Publish Pac	2.1	MS-DOS	B
Text Pac	2.0	MS-DOS	B
Paint			
DR HALO	1.23	MS-DOS	C
MacPaint	2.0	Macintosh	A
Microsoft Paintbrush	2.0	MS-DOS	C
PC Paintbrush	2.5	MS-DOS	C
SuperPaint	1.1	Macintosh	B
Windows Paint	2.03	MS-DOS	C
Plotting Subroutines			
WATCOM GKS	1.3	MS-DOS	B

Numerical

Package/Compiler	Version	Environment	Support
Derive	1.14	MS-DOS	C
Eispack	n/a	MS-DOS	C
Eureka	n/a	MS-DOS	C
GAUSS	2.0	MS-DOS	B
Linpack	n/a	MS-DOS	C
MathCAD	2.0	MS-DOS	C
muMATH-83	4.12	MS-DOS	C
NAg Workstation Library	Rel. 1	MS-DOS	A
Solver-Q	---	MS-DOS	C

Operating Systems

Package/Compiler	Version	Environment	Support
IBM PC, PS/2, and compatibles			
IBM OS/2 Extended	1.2	n/a	B
IBM PC-DOS	4.0	n/a	A
Microsoft MS-DOS (incl IBM PC-DOS)	3.3	n/a	A
Microsoft Windows 286	2.1	MS-DOS	A
Microsoft Windows 386	2.1	MS-DOS	A
Microsoft Windows	3.0	MS-DOS	A
Macintosh II, Macintosh SE, and Macintosh Plus			
A/UX (Unix)		n/a	C
Finder	6.0.5	n/a	A
MultiFinder	6.0.5	n/a	A
System	6.0.5	n/a	A

Software List for Microcomputers cont.

Package/Compiler	Version	Environment	Support
NeXT			
NeXT	1.0	n/a	B
Sound			
SoundWave	1.0	Macintosh	B
MacRecorder	1.0	Macintosh	B
Spreadsheet			
HAL	1.0	MS-DOS	B
Lotus 1-2-3	2.01a	MS-DOS	B
Microsoft Excel	1.5	Macintosh	B
Microsoft Excel	2.0	MS-DOS	B
Statistical			
BASS	88.10	MS-DOS	C
MACSPIN	1.5	Macintosh	C
Minitab	82.1.1	MS-DOS	C
PowerStat	1.04	MS-DOS	C
SAS/PC	6.03	MS-DOS	A
SPSS/PC+	3.0	MS-DOS	A
STATPRO	2.0c	MS-DOS	C
STATWORKS	1.2	Macintosh	B
SYSTAT	3.2	Macintosh	B
SYSTAT	3.2	MS-DOS	B
Word Processing			
Guide	2.0	MS-DOS	C
MacWrite	5.01	Macintosh	B
Manuscript	2.0	MS-DOS	C
Microsoft Word	3.02 & 4.0	Macintosh	A
Microsoft Word	4.0 & 5.0	MS-DOS	A
MIcrosoft Word for Windows	1.0	MS-DOS	B
Nota Bene	3.0	MS-DOS	C
Nota Bene SLS	3.0	MS-DOS	C
PC-TeX	2.1	MS-DOS	B
Sprint	1.0	MS-DOS	B
WordPerfect	5.0 & 5.1	MS-DOS	A
WordPerfect	1.0	Macintosh	C
WordPerfect Library	2.0	MS-DOS	C
WordStar	3.3 & 5.5	MS-DOS	C
Utilities			
Apple Turnover	—	MS-DOS	A
Fastback MAC	2.0	Macintosh	B
Fastback Plus	2.0	MS-DOS	B
Lotus Magellan	2.0	MS-DOS	B
MacTools Deluxe	1.0	Macintosh	B
Mace Utilities Gold	—	MS-DOS	B
MacZap	5.1	Macintosh	B
Norton Utilities	5.0	MS-DOS	A
Retrospect	1.1	Macintosh	B
Sidekick for PM	1.0	OS/2	C
StuffIt	1.5.1	Macintosh	A
XenoCopy PC	1.117	MS-DOS	A
386MAX	4.0	MS-DOS	B

Software List for Mainframe Computers: VM/CMS, UNIX

Each programming language or package available at UTCS has a support level. In general, Class A Products receive full support, Class B limited support (as time and resources allow), Class C no active support.

For complete details of UTCS product support policy, see the UTCS GUIDE TO PRODUCTS AND SERVICES: Introduction.

Package/Compiler	System	Support	Version
Communications			
FTP	VM/CMS	C	1.2.1
Kermit	VM/CMS	A	---
Kermit	UNIX	B	4C(058)
FTS	VM/CMS	A	---
MAIL/MAILBOOK	VM/CMS	A	86.359
macget/macput	UNIX	C	---
netcopy, netexec, to (NetNorth Tools)	UNIX	B	---
xmodem	UNIX	C	---
ftp,rsh,rlogin,telnet,rcp (Access via TCP/IP to most of the networked machines on all three campuses)	UNIX	B	---
rn/Pnews	UNIX	B	---
mail,mh,Mail	UNIX	-	---
TELNET	VM/CMS	C	1.2.1
Graphics			
PLOTBASIC (FORTRAN)	VM/CMS	C	---
SAS/GRAPH	VM/CMS	A	5.18
Languages			
ASSEMBLER(F)	VM/CMS	C	---
Concurrent Euclid	VM/CMS	C	1.9
FORTUTILS	VM/CMS	A	2.2
PL/I OPT Compiler	VM/CMS	B	1.5.1
REXX	VM/CMS	A	---
SNOBOL 4	VM/CMS	C	3.5
Turing	VM/CMS	C	---
VS FORTRAN	VM/CMS	A	1.4.1
VS Pascal	VM/CMS	C	2.2
Waterloo C	VM/CMS	C	1.3
WATFIV	VM/CMS	C	V2L0
WATFOR-77	VM/CMS	A	1.3
C	UNIX	B	---
FORTRAN	UNIX	C	---
Turing	UNIX	C	---

Software List for Mainframe Computers *cont.*

Package/Compiler	System	Support	Version
Numerical			
IMSL	VM/CMS	A	9.2,10.0
LINPACK	VM/CMS	C	---
MINOS	VM/CMS	C	5.1
MINPACK	VM/CMS	C	---
NAg	VM/CMS	A	Mark 11, 13
Statistical			
BMDP	VM/CMS	A	Level 85, Level 87
Minitab	VM/CMS	B	5.1
NAg	VM/CMS	A	Mark 11, 13
NTSYS	VM/CMS	C	1987
SAS	VM/CMS	A	5.18
SPSS^x	VM/CMS	A	3.1
Text Processing			
SCRIBE	VM/CMS	C	4(1400)-1
Waterloo SCRIPT	VM/CMS	B	86.1
XEDIT	VM/CMS	A	---
8700 Pseudotypesetting	VM/CMS	C	n/a
MICROLASER	VM/CMS	C	---
Utilities			
ditroff	UNIX	C	---
FORTUTILS	VM/CMS	A	2.2
TPRINT	VM/CMS	C	---
TCOPYNL	VM/CMS	B	---
TCOPYSL	VM/CMS	B	---
TeX	UNIX	C	---

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